

DR. PATRICK MANSON AND "MOSQUITO MALARIA" *

By HELEN MACMURCHY, M.B.

THIS must be, I think, the proudest moment of my life. To enter the noblest of all professions, to feel that one belongs to that great army among whose leaders are Jenner, Pasteur, and Lister,—names that will never die,—and then, although last and least, to be asked to represent this great profession before so important a body in the sister profession of nursing, is an undeserved honor for which I express my thanks. . . .

The late Sir Andrew Clark calls medicine the Metropolis of the Kingdom of Knowledge. It is an interesting thought. We go to London, where the pulse of national life beats strongest, and we feel ourselves one with the great race from which we all have sprung, and say, as we realize that we are in the metropolis of the British Empire: "This is worth while. This is worth coming across the Atlantic to see."

We lift our eyes to the dome of great St. Paul's or to the towers of Westminster, or stand in Trafalgar Square and see against the blue English sky the figure of the greatest English admiral crowning the column; or, again, we go to "that great temple of silence and reconciliation," and beside the graves that hold all that could die of Tennyson and Browning we say once more, "This is worth while."

Just so when we have made our own the thoughts and discoveries of medical leaders and heroes, and have realized that we were in the Metropolis of the Kingdom of Knowledge, we have said, "This is worth learning."

So you and I have stood in the very place where life fights with death, and helped life to win, and said in our hearts: "This is worth while. I have not lived in vain."

What if medicine asks from us the largest sacrifices and offers us the fewest rewards? Still we are content, for we win the perfecting of our own characters. From living behind the scenes in life's tragedy we gain, unless we are very unworthy, "an attitude of reverence and sympathy which will incline our ear to the whisperings of the infinite and afford us glimpses of the inner impulses by which men shape their lives."

The love of humanity grows within us by the broad view of life our profession affords, teaching us to forget ourselves in the absorbing realization of the patience, often the heroism, of the poor, in whom

* Reply to the toast of "The Medical Profession" at the first annual luncheon of the Alumnae Association, General Hospital Training-School for Nurses, Toronto, Canada.

faith and love in some form still make their bare and narrow life sweet and dear and full of significance to them; or in the equally absorbing realization of the many noble qualities, never quite destroyed by their faults and follies, belonging to those in the higher walks of life.

Another of the truest and purest rewards of those who devote themselves to medical science is in making its principles useful and fruitful. Perhaps I may be allowed to explain what I mean by a brief reference to the most recent work of a man whose name will shed lustre on the medical annals of the closing years of this century,—Dr. Patrick Manson, of "*Mosquito-Malaria*" fame. People are so slow of heart to believe all that the prophets have spoken, and so many foolish objections have been made to this great discovery of the cause of malaria by people who did not know what they were talking about, that it seemed only too likely that this principle, full of the power to save life, would remain barren and useless. Dr. Manson recognized this. He determined to meet the general public on its own ground. A wooden hut was built in England, shipped to Italy, and erected in the fatal field of the Roman Campagna, in the King of Italy's hunting-ground, near Ostia, at the mouth of the Tiber, where malaria has been inevitable and frequently fatal, and where all the permanent inhabitants have malarial cachexia. This hut had mosquito wire-netting screens in the doors and windows and mosquito-nets over the beds. In this hut have lived, since early in July, Dr. Sanbon, Dr. Low, Signor Terzi, and two Italian servants. They have always been indoors from sunset to sunrise, but have gone abroad freely in the daytime, being careful to avoid being bitten by anopheles. They have not taken one grain of quinine, and up to September 21, the date of the last letter from them, they all had remained perfectly well, though all their neighbors were, as usual, stricken by malaria.

But there was another experiment. Dr. Manson got from Rome mosquitoes which had been allowed to bite patients who had malaria. They were packed in ventilated boxes made of mosquito-netting, despatched through the British Embassy at Rome, and, by the courtesy of the postmaster general, came through to London in forty-eight hours by the Indian mail. The first "shipment" arrived on July 5, but only half a dozen had survived the journey, and these took so little interest in themselves that they did not even care to bite Dr. Manson's son, who was the subject of the second experiment.

Mr. P. Thurburn Manson, of Guy's Hospital, was born in China twenty-three years ago, left China at the age of three years, and has never been abroad since, or in any district of England reputed to be malarial. Consignments of infected mosquitoes continued to arrive from Rome in better condition than the first. On September 10 twenty-five

of them bit Mr. Manson; on September 12 ten bit him. He was perfectly well up to September 13. On that day, at four-thirty P.M., he went to bed with severe headache, pains in his back and bones, a temperature of 101.4, and all the other classical symptoms of malarial fever, and the characteristic organisms were afterwards found in his blood by himself, his father, Lieutenant-Colonel Baker, I.M.S., Mr. Watson Cheyne, and three other doctors.

The conclusion that malaria is conveyed by the mosquito is rendered evident to every understanding and brought home to "the man in the street" by this remarkable series of experiments, which will surely, as Dr. Manson hoped, help to render this great discovery fruitful in saving human life.

But this is a reward which we may all share. Every time we persuade people of the real cause and nature of tuberculosis, every time we impress the absolute necessity of pure air, or teach the untold value of perfect cleanliness in fighting disease, just so often we too render these great principles fruitful in saving human life.

You do well, ladies, to be proud of your Alma Mater. It was she who first taught you these great principles, and showed you how to apply them to the care of the sick and the cure of disease, and great as has been the advance of medical science in this century, no one will ever know how much medicine owes to the rise of nursing as a profession and the advent of the trained nurse as the most valuable auxiliary of the physician. Sometimes the patient and the doctor owe everything to the nurse: they *always* owe much. The skill, the kindness, the moral strength, the protection from every untoward influence which the ideal nurse bestows upon her patient, money can never adequately remunerate, and words can never adequately describe.

Your Alma Mater, ladies, is the pioneer training-school of Canada, and but for her your profession would not have attained to the high standard that it holds among us.

When we say this, we cannot forget that always, behind every public institution where good work is done, there stands some man or woman who loves the work and lives for it, scorning delights and living laborious days. And the high standard of this school and of the profession in Canada is largely due to the superintendent of your school. Without her talent for organization, her professional skill, her insight and wise forethought, and her devotion to duty, neither the school nor the profession in Canada would occupy the position which they hold to-day. . . .

Again, ladies, I congratulate you, in the name of the medical profession, upon your magnificent gathering, on your noble profession, and on the Alma Mater which you so worthily represent.